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ABSTRACT

Between 1985 and 1988, the Northwest Regional Educational Laboratory Chapter 1 Technical Assistance Center developed, refined, and disseminated a research-based process for improving local compensatory education programs. Known as the Chapter 1 Improvement Process (CHIP), the effort combined knowledge from five research areas into a year-long, cross-district interactive program improvement effort. This paper provides an in-depth examination of the development and effects of the CHIP model. After a review of the relevant literature, the development of the CHIP model is discussed, followed by a brief description of the CHIP workshop series. The results of a follow-up study in the winter of 1989 using qualitative data obtained from interviews with 35 participants from 33 school districts in Colorado, Wyoming, and New Mexico are then presented, along with an analysis of the findings and relevant illustrations. The three-session CHIP workshop program is based on literature associated with teacher effectiveness, school effectiveness, educational change, content area advances, research on Chapter 1 effectiveness, and exemplary Chapter 1 programs. Tne CHIP model coordinates federal and state law and regulations, parental participation, compensatory programs and instruction, regular class instruction, other school programs, district staff, community members, and student achievement and other student gains. (TJH)

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RESULTS OF A PROCESS FOR IMPROVING CHAPTER 1 PROGRAMS

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Paper presented at the Annual Meeting of the
AMERICAN EDUCATIONAL RESEARCH ASSOCIATION
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Results of a Process for Improving Chapter 1 Programs

Shelley H. Billig, Sam Stringfield, and Alan Davis

Prepared for the American Educational Research Association Annual Meeting, San Francisco, March, 1989

> Policymakers and practitioners should recognize that the improvement of the Chapter 1 programs will occur on a site-by-site basis. Few sweeping reforms will effect uniform changes in local instructional programs.
>
> The Design and Implementation of Chapter 1 Instructional Services
> (Rowan, Guthrie, Lee,and Guthrie, 1986)

Between 1985 and 1988, the Northwest Regional Educational Laboratory Chapter 1 Technical Assistance Center (NWREL-TAC) developed, refined and disseminated a research based process for improving local compensatory education programs. Known as the Chapter 1 Improvement Process (CHIP), it combined knowledge from five research areas into a year-long, cross-district, highly interactive program improvement effort. (Estes, 1988.)

The series has been offered in 16 states and attended by representatives from 374 LEAs, involving approximately 1100 participants. Although at least two versions of the series have been offered, the themes and general approach in each is the same.

Pilot studies of the effectiveness of the CHIP at the local level were presented at AERA by Davis (1988) and Leitner (1988). In the two presentations, a total of six projects from four districts were examined. The two studies concluded that, in general, participating projects:

a) Reported considerable satisfaction with the workshop series,
b) Were continuing to follow the process, post implementation,
c) Reported increased satisfaction with the Chapter 1 program, both on the part of the Chapter 1 staff, and the professional staff of the schools they served,
d) In the three contexts with available outcome data, analyses supported the increased effectiveness ($p < .05$ in each instance) of the Chapter 1 program, post CHIP.

This paper will examine the development and effects of the CHIP model in more depth. After a review of relevant literature, the development of the CHIP model will be discussed, followed by a brief description of the CHIP workshop series. The results of a follow-up study using qualitative data will then be presented, along with an

analysis of the findings with relevant illustrations. Finally, conclusions from this research and implications for both further research and for federally mandated Chapter 1 program improvement efforts will be described.

DEVELOPMENT OF THE CHAPTER 1 IMPROVEMENT PROCESS

The design of the Chapter 1 program improvement workshop series was based on findings from the research literatures in five fields: teacher effectiveness, school effectiveness, school/program change, advances within the content areas, research on Chapter 1 effectiveness and exemplary Chapter 1 programs. CHIP provides LEA participants with the opportunity to view this substantial body of research through local lenses.

Teacher effectiveness research concerns the effects of teachers' in-class behaviors on aggregated measures of student achievement. Reviews of the research (Brophy and Good, 1986) reveal that teachers' in-class behavior patterns produced powerful, predictable effects on student achievement. Such variables as Academic Learning Time (ALT) (Fisher et al., 1980), Interactive Instruction (Stallings, 1980), directed use of praise (Brophy, 1981), and questioning patterns used by teachers in classrooms can be altered to produce increased student learning.

In the **school effectiveness** field, work by Edmonds (1979), Brookover et al. (1979), Barr and Dreeben (1983), Teddlie et al. (1984), Mortimore et al. (1987), and others (for reviews see Purkey and Smith, 1983; Stringfield and Teddlie, 1988) indicate that larger institutions make a significant difference in such areas as "positive school and classroom climate," "clear goals and objectives," and the constructive use of evaluation data. Both the Mortimore et al. and Teddlie et al. studies found that highly effective schools which were serving disadvantaged youth obtained greater mean student achievement than did less effective schools serving middle class populations.

Barr and Dreeben (1983), Mortimore et al. (1987), and Stringfield and Teddlie (1988) nested teacher effectiveness measures within school effectiveness studies. Each study confirmed that in higher achieving schools, teachers were more likely to follow the instructional precepts suggested in the teacher effectiveness research.

Studies of the processes of **educational change** in a variety of contexts such as those by Rosenblum and Seashore-Louis (1981), Fullan (1982), Huberman and Miles (1984), and Hall and Hord (1987) possess considerable congruence as to the conditions necessary for improvement. All found that meaningful change is a multi-year process, with primary roles for instructional leadership and technical assistance.

The value of commitment by those who must implement the change has been repeatedly supported, as have been the needs for clear vision and goals, early success, sustained interaction and staff development efforts among and for involved staff.

Research advances within the content areas, especially in reading, have contributed to the body of knowledge surrounding learning and student achievement. Research on human cognition in the psychology of language, child development, environmental influences on learning, and classroom processes were all cited as significant influences on the production of Becoming a Nation of Readers (Anderson, Hiebert, Scott and Wilkinson, 1985.) Romberg (1986) cited a similar list regarding research contributions to the field of mathematics education.

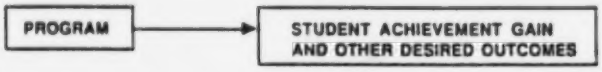
Wimpelberg (1987) and Fullan (1982, Ch. 10) provided intellectual frameworks and research reviews for viewing programmatic change led by an LEA's central administrative staff. Davis (1988) came to similar conclusions from a Chapter 1 perspective. A cost-benefit analysis by Levin and Meister (1986), a "best evidence synthesis" by Slavin (1987), a whole-school vs traditional Chapter 1 comparative study by Stallings (1987), the Designs for Compensatory Education conference sponsored by OERI (Williams et al., 1986), two technical investigations by regional Chapter 1 Technical Assistance Centers (Heppler et al., 1987; Stringfield et al., 1989), and the U.S. Secretary of Education's Exemplary Compensatory Education Recognition Project all point to the potential for significant program impact above simple teacher or school level effects.

A Model of Chapter 1 Effects

Using the above five research bases, it is possible to construct a series of increasingly refined models of Chapter 1 effects on student achievement and other desired outcomes. The simplest model, implicit in the most widely used federal Title 1/Chapter 1 Evaluation Reporting System (TIERS Model A) is represented in Figure 1. For 20 years, researchers have attempted to ascertain simple program effects on students through this model. Using Figure 1, researchers assume that Chapter 1 programs have a direct effect upon student outcomes with no other factors intervening, or all other factors cancelling each other's effects, in the relationship. In many regards, the Coleman Report (Coleman et al., 1966) employed a model of this sort, substituting "school" for "program." Using such a model, Coleman (at the school level) and Carter (at the Title 1 program level) found only modest evidence of school/program effects. Pupils do not attend Chapter 1 programs in a vacuum. Research by Rowan et al. (1988) indicates that typical

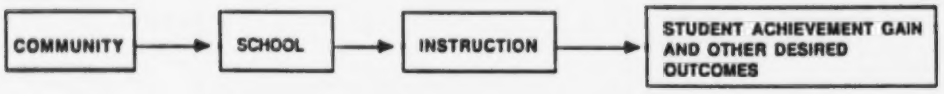
Chapter 1 students spend only 40 minutes of each 6 hour school day in compensatory education programs.

FIGURE 1. SIMPLEST COMPENSATORY EFFECTS MODEL



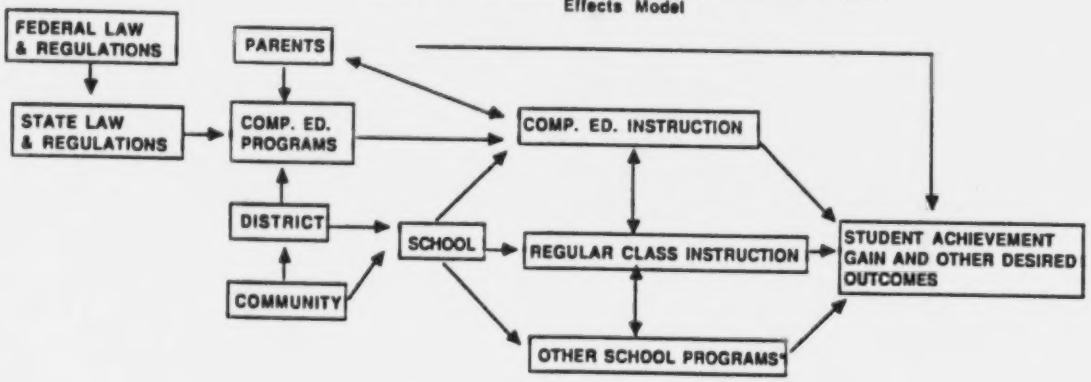
The more recent school effectiveness studies (e.g., Barr and Dreeben, 1983; Mortimore et al., 1987; Stringfield and Teddlie, 1988) have employed more complex models of schooling. This model, represented in Figure 2, reflects the reality that students spend their school days in one or more classrooms, and that each classroom is affected by events in other classrooms, by the ethos of the school and by the community.

FIGURE 2: SCHOOL EFFECTS MODEL



The CHIP process is built on a more complex model. (Figure 3) Following the CHIP model, members of local programs look at several factors in relation to schooling related activities: parent' involvement; federal, state and district level program requirements; and community contextual variables. This model recognizes that Chapter 1, regular classroom, and other programmatic instruction take place in more or less skillfully coordinated school settings. School achievement gain (and other desired outcomes) are presented in the CHIP model as being directly affected by parents, Chapter 1 instruction, regular classroom instruction, and other school programs (e.g., special education, migrant, bilingual, and gifted and talented programs), and indirectly affected by school district, state, and federal policies and practices, and by the larger community. It is a built-in assumption that children learn from all of their school, family, and community interactions.

Figure 3: More Realistic Compensatory Education Program Effects Model



There are two sets of implications of this model for CHIP. The first concerns efforts aimed at improving student outcomes. In the CHIP model,it is assumed that no single intervention is likely to produce improvement in all contexts. If, for example, current Chapter 1 instruction is producing very high rates of Academic Learning Time (ALT) (Fisher et al., 1979) during Chapter 1 classes, an Effective Use of Time Program (Stallings, 1980), focused on Chapter 1 instructors, would be unlikely to produce improvement in student achievement.

Instead of prescribing any single intervention, the CHIP model assumes that greatest gain can be achieved by allocating scarce resources to strengthening the weakest units or connections in the model. At one school or district, this might involve school-wide efforts to improve coordination among regular, Chapter 1, Special Education, and Bilingual programs. In an adjacent school or district, it could lead to efforts to enhance parents' involvement in their children's reading.

Context dictates choices within CHIP. Before improvement activities are undertaken, projects must gather data to ascertain their current condition, both within the Chapter 1 program, and within the larger educational setting. Improvement efforts are directed toward improving the weakest perceived aspects of the model.

A second set of implications stemming from the model concern measurement. The great majority of Chapter 1 programs have

historically gathered "signal evaluation" data (King and Pechman, 1984) to satisfy state and federal demands. This typically translated to aggregated participation, cost, and "Model A" (Pre-Post gain measured in NCEs on norm referenced tests) achievement measurement. Given the generally unmet psychometric concerns over the measurement of gain (Bryk and Weisberg, 1977; Rogosa, Brand and Zimowski, 1982; Sorenson and Halliman, 1977: Bryk and Raudenbush, 1988), "Unit of analysis" (Cronbach, 1976; Haney, 1980; Burstein, 1980), and measurement issues caused by the nesting of Chapter 1 programs within and across schools, the value of such data is questionable.

In order to have a more complete study of learning, the following are required:

1) a model for individual growth,
2) data from at least three points in time,
3) analytic tools which accurately reflect the levels of the model.

CHIP meets the model specification requirement, and sustained effects studies begin to address the "three points in time" condition.

THE CHIP WORKSHOP SERIES

The Chapter 1 program improvement workshop series posits a ten step process for planning and implementing change. Briefly, the ten steps are as follows:

1. Identify key individuals to coordinate improvement.
2. Become familiar with the research base regarding effective practices.
3. Assess current practices.
4. Target certain aspects of Chapter 1 practices for special emphasis.
5. Set performance goals for targeted Chapter 1 practices.
6. Identify effective techniques to accomplish goals.
7. Develop a plan.
8. Implement a plan.
9. Monitor progress and provide assistance.
10. Reassess practices and renew efforts.

The key themes underlying the CHIP are as follows:

1. DATA DRIVEN: Participants are required to gather and to examine data about their programs. These data focus on two areas: current student outcomes as reflected by student achievement scores on norm referenced achievement tests and results of a self-assessment instrument, administered to administrators, regular classroom teachers, and Chapter 1 staff in the participants' districts. These data yield a picture of the program at the onset of the program

improvement process, and serve two functions: 1) as a comparison point with which to quantify progress made and 2) as a system which allows reinforcement of the strengths of the program and targeting of areas which reflect the relative weaknesses or areas in which improvement efforts will be targeted.

2. RESEARCH-BASED: Participants in the program are introduced and encouraged to use the research on Chapter 1 instruction and programs at all times. From the first workshop where participants are given hands-on exercises utilizing the research through the planning effort and to implementation, participants are guided through information on effective practices and encouraged not to "re-invent the wheel", but rather to learn from what is known.

3. TEAM CENTERED: When districts participate in CHIP, they are asked to do so in a team. The team is to be composed of the Chapter 1 coordinator, at least one principal, one regular classroom teacher, and one Chapter 1 teacher. Generally the Chapter 1 coordinator heads the team. All team members are required, in so far as possible, to attend all of the workshops in the series and to complete all assignments. The latter usually involves meetings with school personnel and each other between workshops. The team approach is necessary to engender commitment, motivation, and responsiveness to the task.

4. LOCAL CONTROL: The CHIP process is built on facilitating local decision-making. Using the data gathered from their own programs and the research base, the team of people from the district are encouraged to make programmatic decisions which best reflect the realities of their districts. They look at their particular situations with regard to personnel, politics, community support and the like, and plan changes that best fit the context in which they are operating.

5. SYSTEMATIC PROCESSES: Throughout their participation, team members are trained in the use of systematic approaches to program improvement. Although there is great diversity in the content of the program improvement plans, the process used by all participants to target areas for improvement, set performance goals, identify techniques to accomplish goals, develop plans, implement plans and monitor success is the same.

6. FOCUS ON STUDENT OUTCOMES: Participants are encouraged to keep focused on the student learning. While instructional practices may be changed or organizational goals may be addressed, the key is always to examine how the students will be affected.

Workshop 1 of the CHIP assists participants in obtaining overviews of relevant "effectiveness" research and of their own programs relative to those research literatures. It begins with an overview of the workshop series and the 10 step process for planning and implementing change. Thirteen "Characteristics of Effective Compensatory Education Programs" as identified through a review of research by the U.S. Department of Education (Griswold, et.al., 1986) are introduced. These are as follows:

- o Clear goals and objectives
- o Coordination with the regular school program/other special programs
- o Parent/community involvement
- o Professional development and training
- o Strong leadership
- o Appropriate instructional materials, methods and approaches
- o High expectations for student learning and behavior
- o Closely monitored student progress
- o Regular feedback and reinforcement
- o Excellence recognized and rewarded
- o Positive school/classroom climate
- o Maximum use of academic learning time
- o Evaluation results used for program or project improvement

Highly interactive discussions of these characteristics are structured into the day. A more formal tool, "The Chapter 1 Self Assessment Instrument" (Murray, Davis, and Stringfield, 1986, 1988) is then introduced so that participants may systematically examine their own projects. A number of other tools, designed to evaluate various aspects of participants' local programs are presented. These facilitate districts' examination of student, school, and program level performance in the areas of instructional balance, Academic Learning Time, and similar topics.

Between sessions one and two, participants are asked to perform self-assessment and systematic classroom observations to identify both the strengths and weaknesses of their current practices. Suggested readings are from primary and secondary research on instructional variables affecting student achievement.

Workshop 2 enables participants to focus their improvement efforts. The workshop begins with presentations of data gained by local programs, including descriptions of the aggregated results of Self-Assessment, as completed by Chapter 1 and other teachers, principals, and other involved administrators. Areas for improvement are targeted, and participants set performance goals and delineate strategies and techniques to achieve their goals. Additional

information is presented on specific effective practices. Examples are given of exemplary programs and practices from across the nation. Volumes 2 and 3 of the Effective Compensatory Education Sourcebook (NWREL, 1986, 1987), and NWREL's "In their own words" series are central to this process. Specific topics addressed are determined to a large extent by outcomes of the self-assessments performed by the participants. As an assignment to be completed before the next session, participants are asked to develop specific objectives and strategies for change in one targeted area. A series of change planning and management forms and instructions are provided for that purpose.

Workshop 3 revolves around implementation and monitoring processes. Presentations focus on factors affecting the change process, and research based methods for change facilitation. Attention is paid to each district's particular change readiness, and strategies for working within that situation. Participants are taught specific methods for monitoring and evaluating the effects of their efforts, and are reminded of the eventual need to renew the process.

Specific issues addressed include staff development and program leadership. Other research based topics may also be discussed. Technical assistance is offered in refining, implementing, and monitoring the plans.

Changes in the series occurred as the research fields had undergone refinement, and as TAC staff expanded their experience. For example, the 1987-1988 series included refined sessions on leadership (e.g. Greenfield, 1986; Murphy and Hallinger, 1987; Bennis and Nanus, 1985; Kanter, 1983); "higher order thinking skills" (e.g. Marzano et al., 1988; Resnick, 1987), and hands-on experiences with microcomputer based Chapter 1 data-bases which facilitate data use for targeted program improvement (e.g. Deck and Davis, 1988.)

Throughout the series, the TAC and the local State Department offered on-site and telephone consultations. Materials were provided to assist participants in becoming familiar with the research base, to profile their own programs, to plan improvements and to monitor outcomes. Ongoing technical assistance in subsequent improvement cycles was provided on request.

EVALUATION OF THE CHIP SERIES

In the winter of 1989, an evaluation of the impact of the Chapter 1 program improvement process was conducted. The methods used to conduct this evaluation are presented next, followed by a discussion of results.

Methods

Interviews were conducted with 35 participants from 33 school districts in three of the states where the workshop was offered. Of these, 14 were from Colorado, 12 were from New Mexico, and 7 were from Wyoming. Districts represented rural, suburban, and urban districts.

The interviews used an open-ended format, asking questions and probes addressing the following areas:

- changes, if any, made in the Chapter 1 program as a direct result of having participated in the program improvement workshop series
- the process of implementing their improvement plans, any difficulties encountered
- student outcomes as a result of the program improvement process
- teacher outcomes as a result of the CHIP process
- negatives associated with the process or with the changes
- significant facilitators or barriers to change in the district
- suggestions for improvement in the CHIP series

Participants were asked to send data reflecting student achievement for the year immediately preceding their attendance in the series, the year that they attended the series, and the year after they attended, if they were 1986-1987 participants.

Respondents were also asked to submit self-assessment data for the year of their participation and the year immediately following. If the latter did not exist, participants were asked to re-administer the self-assessment and send the data. Although qualitative data were gathered for all 33 districts, quantitative data to date were less forthcoming. Fewer than a third of the districts have sent these data. While efforts are continuing to gather quantitative data, the analysis here will be confined to the information elicited in the interviews.

Results

Global responses to the follow up interviews ranged from "You ought to see the difference! We moved from an average graph (i.e, midrange scores on the self-assessment tool) all the way to the right (extremely positive scores). I've

expanded the process to all of my other programs. It's the best thing in the world. If anyone follows through on it, they can't help being a success." (quote from a participant in a small, rural school district in New Mexico) to "Basically we didn't implement a thing." (quote from a participant in a rural district in Wyoming)

Approximately two-thirds of those surveyed (63%) had changed their programs in a self-reported positive way, and attributed those changes directly to their participation in the workshop series. All respondents reported finding their participation positive, in the sense that they found the workshops informative and enjoyable.

The effects of participation were extremely varied, ranging from total institutionalization of the CHIP process and of the planned efforts to no impact at all. These degrees of success are addressed next.

Institutionalization of the CHIP process

Eight of the 33 districts surveyed have institutionalized CHIP in their districts. They require staff to perform self-assessments, become familiar with the research base, and use the CHIP planning process to organize change efforts. In some of the smaller districts, the approach has been mandated for all federal programs. In other districts, the participating teachers presented workshops throughout the district paralleling the series they were attending.

The larger districts which institutionalized the process, did so in a way that increased their sense of ownership. In both of these examples, the districts changed the self-assessment tool to a shorter, more locally sensitive measurement.

Other districts adopted the process, but redesigned the forms. Some added requirements to the process, such as individualized educational plans or staff development surveys. These "refinements" were encouraged, and most districts who report having made such changes also report the series as having very positive outcomes, particularly with regard to teachers.

Institutionalization of the planned change

Seventy-four percent of those surveyed reported implementing their plans for change made during the workshop. All of those who chose instructional areas report continuing success in their endeavors and positive outcomes for teachers. When respondents reported being able to link student outcomes to their change efforts, the changes they had made were typically in instructional areas.

One of the districts which targeted academic learning time, for example, required all Chapter 1 teachers to monitor and be monitored by each other. Each teacher was offered concrete suggestions and each instituted positive changes. When monitored again, each showed significant declines in nonengaged time in their classrooms.

In one Wyoming district, the team decided to change their instructional approach. They reviewed the research, talked extensively with Chapter 1 staff in other programs, attended a reading conference, and visited other programs. This year, they initiated the new program, and report very positive teacher outcomes as well as anticipating very positive student outcomes based on observations and teacher judgments that has occurred thus far. According to these respondents, this action is directly attributable to the workshop series.

One participant who was the sole representative from his district targeted rewards and reinforcement for student learning. He instituted a certificate program for good work awarded to students and congratulatory phone calls to parents. As the respondent put it, "the students feel good about themselves now, and I feel better because they feel good".

Institutionalization of change in organizational areas was less clear. Those who targeted staff development, for example, reported positive change if they were given the freedom to design the type of staff development they wanted, and the opportunity to follow-through. Two of the cases were instructive in this regard: in one, the participants targeted and planned an extensive staff development effort, only to have the superintendent deny all requests for inservices that involved taking teachers out of the classroom. The team attempted to work around this rigidity, but reportedly were able to implement very little.

In another case, the type of staff development was mandated from the top rather than from the team. Because the staff felt the effort was "top down" rather than "bottom-up", the effort reportedly failed. Staff attended the inservices, but made no changes in the classroom. In this case, however, other changes did reportedly occur in parent involvement, another area targeted by the team. This effort, though, has also foundered since the coordinator who lead the effort has been ill, and no one has assumed a strong leadership role.

Those who target coordination between Chapter 1 and the regular classroom similarly report mixed results. An example of "success" here was reported by a team from New Mexico who changed the entire Chapter 1 setting from pull-out to in-class. Success in coordinating between the

regular classroom and Chapter 1, but not in the coordination of special education and Chapter 1 was reported by respondents in a district in Colorado. This success was attributed to having hired a teacher for Chapter 1 who had attended the workshop series and who now used half of her time informally coordinating instruction between the school, grades, and classrooms. Several others reported mixed results, apparently dependent on either the principals' role in reinforcing the coordination or the presence of a reported "anti-Chapter 1 bias" among classroom teachers.

The last point to be addressed with regard to targeting attributes for change revolves around the targeting of parent and community involvement. The majority of all of the participants from the school districts attending the workshop targeted parent involvement. There are several possible explanations for this: 1) this may be an artifact of the self-assessment instrument used (see Davis and Billig, 1989); 2) this may be the least threatening attribute for teams to target in the sense that none of those on the team or on the staff hold themselves responsible for parent involvement deficiencies; 3) this may be the weakest areas of these programs.

Whatever the explanation, those who targeted parent involvement as a means of program improvement reported decidedly mixed success. That is, if success was defined as effort and implementation of plans, nearly all reported success. But if success was measured by outcome, i.e., increased parental involvement, many reported falling far short of their goals. Two cases are illustrative: in a large rural district in New Mexico, parent surveys were distributed and collected, programs were designed to meet reported needs, the media were involved in advertising, and on the day of the first event, only 12 parents were present. The project had never had more than six parents attend previous meetings, so that in one sense, 12 participants represented success. Yet the staff had hoped for a turnout many times larger. The coordinator felt their hours of effort had not paid off.

In a second case, in a suburban district in Colorado, a myriad of parent involvement activities occurred and the percentage of parents participating in the school, and working with their children at home increased dramatically, but when the self-assessment instrument was re-administered the following year, parent involvement again emerged as the area most in need of improvement. The second year data had a stifling effect on the team's willingness to engage in the CHIP process the next year.

Participating districts which reported no impact

Six of the districts in this study reported attempting and/or institutionalizing little or no change as a result of their participation. Reasons cited for this generally reflected lack of leadership or lack of unity among the team. One district participant from Wyoming reported enjoying the series but doing absolutely nothing with it. In this respondent's words, "There was no one to call (for) a meeting or to follow-up with." Another from a district in New Mexico said, "We had one teacher attending from each of the schools. They pretty much did their own plans. I was going to coordinate with them, but I ended up being switched back to the classroom, and I simply didn't have the time."

In general, the districts which reported no impact also reported a lack of leadership, a lack of commitment to the process, and, in some cases, a conviction that change was not possible given their local circumstances.

Teacher Outcomes

The majority of participants in the CHIP process reported very positive outcomes for teachers. Comments here indicated that teachers felt energized and sensitized as a result of their participation. Many felt that the presentation of exemplary characteristics served a valuable informative function in that teachers saw that a) success can be had with Chapter 1 students; b) success can result from a variety of approaches; and c) change is possible.

Teachers also reported value in the networking that took place. They felt they had access to new people, new ideas, and different programs. This empowered them in that avenues for seeking and finding information had opened for them, support systems for change existed, and expectations that change efforts would be made were normative. Many of the teams reported that there was increased collaboration among Chapter 1 teachers across schools and with others in their buildings. In one New Mexico district, the team holds regular reunions to discuss the latest research in Chapter 1. In a midsized Colorado district, the coordinator expressed great satisfaction with the new unity and pride felt by her Chapter 1 teachers as a result of their participation in the series.

The strongest effects were reported by participants from rural, relatively isolated Chapter 1 programs. Particularly when the coordinator was also the Chapter 1 teacher, or when that person was the entire Chapter 1 staff, the reports of positive outcomes on the participant were very strong, and the sense of empowerment was pervasive. This was the case in six of the districts that were surveyed.

Teacher outcomes were strongest in those programs which chose instructional areas to target. However, this only occurred if the teachers were themselves committed to the process. In one district, for example, the teachers formed subcommittees to increase coordination, to investigate cooperative learning, and to survey their colleagues on the quality of staff development. The team met periodically to oversee these subcommittees and make recommendations for policy.

In another district, the teachers who participated determined that they simply could not make any changes at all, that their case was hopeless, that they had no district or school support, and therefore it was not worth their time or effort to try. The only reported change that transpired in this program was the substitution of Apple computers for Hoffman machines: this change reportedly made the teachers unhappy.

Student Outcomes

Student outcomes have been much harder to attribute directly to participation in the CHIP process. Where achievement data are available (20% percent of the respondents made these data available), the direction of change was generally positive. However, too few districts reported this to be meaningful.

Self-reports on student outcomes were also positive but these reports are suspect in that with probes, few could say that the relationship was direct. Much more information is needed here to draw conclusions.

Negative Outcomes Associated With CHIP

The only negative outcomes reported were in two areas: the amount of paperwork and data collection required and negative evaluations of the self-assessment instrument. The former complaint, made by two districts, was in both cases tempered by a stated recognition of the necessity of the work. The comments regarding the self-assessment instrument used in the CHIP motivated the two districts making the complaints to develop their own self-assessment instruments, both of which are currently being used annually in these districts.

Facilitators/Barriers to Change

This was an area respondents frequently had difficulty articulating. Most school districts, 21 out of 33, (63%) report no problem whatsoever in the planning or implementation process. These programs judged themselves to be successful with regard to all phases of CHIP, and were

the ones which institutionalized either the process, the plans, or both.

Those sites with mixed outcomes or with participants who were not able to cite any outcomes from having participated provide interesting insight. A district in New Mexico, for example, sent a large team with the Chapter 1 coordinator and teachers from various schools to the CHIP series. The effect, as reported by the participants, was to make a good program even better, so much so that they applied for and won the Secretary's Recognition award the next year. During that year, the Chapter 1 coordinator required participation of all of the Chapter 1 teachers in the one school that, in his judgment, was not doing well. He attended along with these teachers, but the teachers alone targeted areas and drew up plans for change. The teachers never committed themselves to these plans, however, apparently because they felt they were there to please the coordinator. The result was no change that second year, but a major one this year: the coordinator was appointed Assistant Superintendent, and he has declared that school a schoolwide project. All of the school's staff are now involved in change efforts.

Conclusions

The nature of qualitative studies is such that every story is different: different circumstances, different players, different motives and means. The cases were filled with humanity: change grinding to a halt due to a pregnancy or the death of a spouse, districts attending because fathers were authorities at the state level, and so on.

Yet through the diversity, common threads were established. In this section, conclusions that have emerged as a result of the interviews conducted will be presented.

1. The CHIP process is an effective facilitator of change, but it is not a panacea. CHIP served as an effective program improvement process for the majority of participants surveyed. Changes were instituted. In many cases, the changes were reported to have had significant impact on the programs, and the CHIP process itself has been institutionalized.

In evaluating CHIP as a process, it is clear that respondents generally saw value in their participation. Most participants planfully instituted change and were able to see the results of their efforts. Many reported significant positive teacher outcomes, and many could cite self-assessment data indicating positive change. However, there are not enough data in this study to know whether these changes have had a positive impact on student achievement.

2. There are strong indications that certain factors are keys to success in bringing about change in Chapter 1 programs. This study suggests that the following are of critical importance:

a. Strong Leadership: As many researchers have found, strong leadership is a critical variable. The leader could be, and most often was, the Chapter 1 coordinator. Principals or teachers could also provide leadership although this study indicates that they may meet with less success. Competent leaders in organizations, and no less so in Chapter 1, had important functions to serve in bringing about change: they need to manage attention, meaning and trust.

Management of attention would implied that the leaders, perhaps along with the team, envision change and are able to compel commitment in others because of their focus. They have a vision in the most pragmatic sense: a set of intentions, goals and outcomes. The CHIP enabled the leaders and leadership teams to establish such a vision, to bring focus to the vision, and to approach that vision through the use of a systematic process.

Leaders also managed meaning. Successful team leaders made their ideas tangible and salient so that their constituents could support them. This requires more than explanation or clarification. Rather, the leader or leadership team defined the goals and actively socialized others into believing in them. Those involved came to be able to visualize the change and the means to achieve it. Successful CHIP teams were able to produce this through their leadership: the Chapter 1 staff, regular classroom teachers and sometimes parents came to view their programs differently, and this process was empowering.

Management of trust implies constancy. Effective teams came together, expressing unity in action and thought. With effective leadership, they knew they could take risks, and could initiate change efforts without negative repercussions. Again, this was empowering.

The flip side of this was lack of leadership. There is a term in medicine- iatrogenic- for illnesses caused by doctors or hospitals. There should be an analogous term in education for deficiencies or barriers to improvement caused by administrators, teachers or schools. Clearly this study indicates that lack of leadership or, as discussed below, lack of district support, can and occasionally did scuttle any change effort.

b. District Support: This was shown more to be a key when absent than when present, i.e., when there was district

support, it was frequently taken for granted. When it was absent, the changes simply were more difficult or impossible to bring about. In the case where leadership came in the form of the Chapter 1 coordinator, district support tended to be more forthcoming. Such administrators had more influence over principals and could pave the way for teacher change and for such efforts as those surrounding coordination between the Chapter 1 program and the regular classroom. With district support, resources in the form of release time, consultants, new materials, and the like were also more likely to be available. These increased likelihood of successful change.

c. Teacher ownership of the process. So-called "buy-in" is critical for success. Where participants felt changes were initiated top down with little attempt to involve them in deciding the character of the change or where participants attended the workshop because they felt they were required to do so, change was much less likely to occur. Where participants worked as a team to decide the direction and content of the change, the process was likely to be successful.

d. Areas targeted for change: Change is a complex social process. It requires motivation and perceived benefit. What takes place in schools is affected by many variables: role relations among staff, patterns of communication, competitive domains of influence and sources of funding, capabilities of various individuals at every level in the hierarchy, the social and economic structuring of the school and the community, the philosophy of instruction and whether or not there is consensus on the approach: in short schools represent complex social systems within a complex social environment. It is within this system that Chapter 1 operates, and within this system that Chapter 1 programs attempt to change.

Within this context, it is easy to see why targeting instructional variables is most likely to be associated with success. Changes in academic learning time, high expectations for student learning, feedback, monitoring students and rewarding excellence are more easily achieved. These areas are most directly controlled by Chapter 1 staff, and are most likely to be unaffected by other components in the educational social system.

Similarly, organizational change which is confined to the program, i.e., staff development, positive climate, clear goals and objectives or using evaluation results for program improvement, is more likely to meet with success. In these areas, change typically can be brought about through individual or Chapter 1 group effort rather than involving others within the system, though exceptions have been previously cited here.

Those areas that tended to be associated with less success, i.e., coordination with the regular program and parent/community involvement, involve changing others' behaviors and/or attitudes. This is indeed a more difficult and challenging task, one which cannot be totally determined by Chapter 1 staff efforts alone.

Among the projects surveyed, great efforts to change the Chapter 1 approach to parents were made, along with numerous attempts to provide more avenues for parent involvement. While respondents reported an increase in parent involvement, the effect typically was not viewed as sufficient to encourage further effort. Similarly, with regard to coordination, results were mixed. A key to coordination was the district's support.

e. Importance of information dissemination and expectations for change in a cross-district group setting: The provision of networking, exemplary program information, and norms for change served a powerfully motivating function for some Chapter 1 program participants. Many reported being empowered by the information and this sense of being able to make a difference, along with perceived access to technical assistance "experts" promoted very active efforts to plan and implement positive change.

Implications of this study for the program improvement provisions in the Chapter 1 reauthorization law

P.L. 100-297, the law reauthorizing Chapter 1, contains a number of program improvement provisions. Any Chapter 1 program which does not show "adequate" gains or which does not show aggregate gains by instructional area computed on a schoolwide basis is subject to targeting for program improvement. As a result of this targeting, a local education agency (LEA) must file a program improvement plan developed in consultation with parents and approved by the local Board of Education. If the program is again targeted for improvement using the same criteria a second year, the Chapter 1 office of the state department of education (SEA) must join the LEA in developing local improvement plans.

SEAs are currently in the process of enacting state plans for program improvement processes, and many are using approaches which closely parallel the one presented here. Several are using the self-assessment tool developed and used in CHIP, the same research base incorporating the 13 attributes of exemplary compensatory education, and a planning approach which closely resembles this one. How can the results of this study be used as guidance for those about to embark on a similar course?

Many of the conclusions of this study are pertinent to the SEA plans. For example, it was found that where meaningful program improvement efforts were made, LEAs generated commitment to the proposed change from those who would later implement it. External incentives and mandates were not enough. This issue will most likely be of even greater concern if the districts are not engaging in this process voluntarily.

Commitment to a change process can be elicited through various means. This study suggests that one approach may be to invite Chapter 1 and regular classroom teachers to be on the improvement team, and encouraging all of them to play an active role. By implication, if parent or community involvement areas are to be targeted, representatives from those groups must also be actively recruited onto the improvement team.

The teams should be lead by the Chapter 1 coordinator or another leader who could provide focus, obtain district support, and motivate the team members. Attention, meaning and trust should be managed. Having the administrative staff play an active role should also allow for more realistic planning in that these people have more control over resources and staff development activities.

This study also found that the program improvement teams should target, in so far as possible, areas that are more likely to be responsive to change efforts. To sustain the improvement effort, participants need to feel a sense of efficacy. This means the instructional areas and those organizational areas most under the direct influence of the Chapter 1 program should perhaps be the initial targets of change efforts.

The process should be data driven. Individuals need to quantify their impact, and using self-assessments in addition to student and teacher outcomes will both give the process momentum and focus. The improvement teams will be able to identify and address the weakest links in their programs. In addition, effects will be measurable.

The approach to be used in the program improvement process should be systematic. The new law requires timelines, and LEAs should use them judiciously. Planned change should be realistic, but ambitious. A systematic, planful approach complete with assignments of responsibility, techniques to accomplish goals, and built-in monitoring can work well.

Finally, the district and state administrators who are involved in the program improvement effort should play an active role, not just have a symbolic presence. At the very least, it is vital that those engaging in the change process feel that the district will support their efforts. If

district administrators participate in the process at the outset, they can be involved in the direction of the change and can mediate between various interest groups and factions by presenting information on the larger district picture, and can steer team members into choosing areas that have the greatest probability for success.

SUGGESTIONS FOR FUTURE RESEARCH

This study has produced findings that indicate promise for the Chapter 1 Improvement Process as a tool for effective change in Chapter 1 programs. It is based on research, uses approaches which have produced results in a variety of contexts, and is universally reported by participants to be enjoyable and informative.

These findings, however, are suggestive rather than definitive. More data, especially on student outcomes, are needed to evaluate the impact of the process. In the future, it is suggested that measurements be made of student achievement, program self-assessment, administrator and teacher perceptions and attitudes, and perhaps additional measurements of other aspects of the Chapter 1 program by various affected or affiliated individuals prior to the provision of the workshop series and again re-administered at various points after the intervention has taken place. This study is instructive in its analysis of trends, but for added value, a more formal, systematic evaluation is needed.

There are also promising directions for future study suggested by this research. Outcomes for volunteer versus nonvolunteer subjects is one such area to be investigated. As Rosenthal and Rosnow (1975) have pointed out, nonvolunteers are likely to be less enthusiastic and less motivated to change. Given the new program improvement provisions in the Chapter 1 reauthorization, this factor is likely to be salient, and should be investigated further.

The influence of context is another promising area for research. Investigators should look at outcomes of the program improvement processes by urbanity and other social and economic variables to see whether they are producing differential effects. This research suggests that large urban schools benefit from the CHIP process in different ways than small rural ones. Given new rural education initiatives in Chapter 1, this area for research assumes added importance.

Another area for research concerns the thirteen characteristics of exemplary Chapter 1 programs and their relationship to student achievement. Several participants in the CHIP observed that these characteristics did not appear to have equal probabilities of influencing student

outcomes. Studies connecting change efforts in these thirteen target areas to student achievement are needed.

Finally, the role of the Chapter 1 Technical Assistance Centers (TAC) in mediating program improvement efforts requires investigation. This study demonstrated that TACs can be effective change agents. The CHIP was offered by TAC staff in all of the cases presented here. These staff members come to the process with their own areas of expertise, access to information, and abilities to motivate participants to engage in change efforts. These variables are pertinent to the program improvement processes in that participants may be encouraged, though not necessarily consciously, to pursue certain types of change or to investigate certain practices more vigorously. It may also be that varying levels of expertise of the presenters of the workshop could influence the success of the series as a whole.

Chapter 1 is at a critical juncture in its history with regard to program improvement. As programs attempt to comply with the new legislative mandates, evidence from the current study gives reason for optimism.

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